

SECTION 064023

INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This Section includes the following:
 - 1. Plastic-laminate cabinets.
 - 2. Solid-surfacing-material countertops.
 - 3. Closet and utility shelving.
 - 4. Wood veneer panels for column enclosures.
 - 5. Plastic laminate for column enclosures.
 - 6. Shop finishing of interior woodwork.

1.2 RELATED WORK

- A. Section 01 81 13, SUSTAINABLE DESIGN REQUIREMENTS for additional LEED requirements.
- B. Section 01 81 19, INDOOR AIR QUALITY REQUIREMENTS for VOC limit.
- C. Section 06 10 00, ROUGH CARPENTRY for wood furring, blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
- D. Colors and Finishes: Section 09 06 00, SCHEDULE FOR FINISHES.

1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated, including cabinet hardware and accessories and finishing materials and processes.
- B. Product Data: For panel products, high-pressure decorative laminate, adhesive for bonding plastic laminate, solid-surfacing material, fire-retardant-treated materials, cabinet hardware and accessories and finishing materials and processes.
 - 1. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.
- C. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show details full size.

2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers and other items installed in architectural woodwork.
4. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.

D. Samples for Initial Selection:

1. Shop-applied transparent finishes.
2. Shop-applied opaque finishes.
3. Plastic laminates.
4. PVC edge material.
5. Solid-surfacing materials.

E. Samples for Verification:

1. Lumber with or for transparent finish, not less than 5 inches (125 mm) wide by 24 inches (600 mm) long, for each species and cut, finished on 1 side and 1 edge.
2. Veneer leaves representative of and selected from flitches to be used for transparent-finished woodwork.
3. Veneer-faced panel products with or for transparent finish, 8 by 10 inches (200 by 250 mm), for each species and cut. Include at least one face-veneer seam and finish as specified.
4. Lumber and panel products with shop-applied opaque finish, 50 sq. in. (300 sq. cm) for lumber and 8 by 10 inches (200 by 250 mm) for panels, for each finish system and color, with 1/2 of exposed surface finished.
5. Plastic laminates, 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish, with 1 sample applied to core material and specified edge material applied to 1 edge.
6. Thermoset decorative-panels, 8 by 10 inches (200 by 250 mm), for each type, color, pattern, and surface finish, with edge banding on 1 edge.
7. Solid-surfacing materials, 6 inches (150 mm) square.
8. Exposed cabinet hardware and accessories, one unit for each type and finish.

- F. Product Certificates: For each type of product, signed by product manufacturer.
- G. Woodwork Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.
- H. Qualification Data: For Installer and fabricator.
- I. LEED Submittals:
1. Credits MR 4.1 & 4.2: For products having recycled content, documentation indicating percentages by weight of post-consumer and pre-consumer recycled content.
 - a. Include statement indicating costs for each product containing recycled content.
 2. Credits MR 5.1 & 5.2: For products manufactured within 500 miles of project site *and* whose raw materials are extracted, harvested or recovered, within 500 miles of the project site, documentation indicating the location and distance of material manufacturer and point of extraction, harvest, or recovery for each raw material from the Project site.
 - a. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
 3. Credit MR 7: Certificates of chain of custody signed by manufacturers certifying that products specified to be made of certified wood were made from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC 1.2, "Principles and Criteria." Include evidence that mill is certified for chain-of-custody by an FSC-accredited certification body.
 - a. Include statement indicating costs for each wood based product.
 4. Credit EQ 4.1: Manufacturer's product data for installation adhesives and sealants applied on site and within the vapor barrier, including printed statement of VOC content (in g/L).
 5. Credit EQ 4.4:
 - a. Composite wood manufacturer's product data for each composite wood product used indicating that the bonding agent contains no urea formaldehyde.
 - b. Adhesive manufacturer's product data for each adhesive used indicating that the adhesive contains no urea formaldehyde.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project

and whose products have a record of successful in-service performance. Shop is a certified participant in AWI's Quality Certification Program.

- B. Installer Qualifications: Fabricator of products and certified participant in AWI's Quality Certification Program.
- C. Source Limitations: Engage a qualified woodworking firm to assume undivided responsibility for production of interior architectural woodwork with sequence-matched wood veneers.
- D. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.
 - 1. Provide AWI Quality Certification Program labels and certificates indicating that woodwork, including installation, complies with requirements of grades specified.
- E. Fire-Test-Response Characteristics: Where fire-retardant materials or products are indicated, provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation.
- F. Forest Certification: Provide interior architectural woodwork produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is

operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.

2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.8 COORDINATION

A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

B. Hardware Coordination: Distribute copies of approved hardware schedule specified in Section 08 71 00 DOOR HARDWARE to fabricator of architectural woodwork; coordinate Shop Drawings and fabrication with hardware requirements.

PART 2 - PRODUCTS

2.1 MATERIALS

A. LEED Requirements:

1. Recycled Content of Steel Products: Provide steel products with minimum 25% post-consumer recycled content.

2. Provide a minimum of 50 percent (by cost) of wood-based materials that are produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

3. Provide adhesives, sealants, paints, and coatings applied on site and within the vapor barrier that comply with VOC limits outlined in Division 01 Section "Indoor Air Quality Requirements."

4. Do not use composite wood or agrifiber products or adhesives that contain urea-formaldehyde resin.

- B. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- C. Wood Species and Cut for Transparent Finish: Refer to Section 09 06 00, SCHEDULE OF FINISHES.
- D. Wood Species for Opaque Finish: Refer to Section 09 06 00, SCHEDULE OF FINISHES.
- E. Wood Products: Comply with the following:
1. Recycled Content of Medium-Density Fiberboard and Particleboard: Provide products with an average recycled content so postconsumer recycled content plus one-half of preconsumer recycled content is not less than 30 percent.
 2. Hardboard: AHA A135.4.
 3. Medium-Density Fiberboard: ANSI A208.2, Grade MD, made with binder containing no urea formaldehyde.
 4. Particleboard: ANSI A208.1, Grade M-2-Exterior Glue, or straw-based particleboard complying with requirements in ANSI A208.1, Grade M-2, except for density.
 5. Softwood Plywood: DOC PS 1.
 6. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no urea formaldehyde.
- F. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.
1. Manufacturers: Subject to compliance with requirements, provide high-pressure decorative laminates by one of the following:
 - a. Abet Laminati, Inc.
 - b. Arborite; Division of ITW Canada, Inc.
 - c. Formica Corporation.
 - d. Lamin-Art, Inc.
 - e. Nevamar Company, LLC; Decorative Products Div.
 - f. Panolam Industries International Incorporated.
 - g. Westinghouse Electric Corp.; Specialty Products Div.
 - h. Wilsonart International; Div. of Premark International, Inc.
- G. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with ISSFA-2.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. ABA Industries.

- b. Avonite, Inc.
 - c. E. I. du Pont de Nemours and Company.
 - d. Formica Corporation.
 - e. LG Chemical, Ltd.
 - f. Meganite Inc.; a division of the Pyrochem Group.
 - g. Nevamar Company, LLC; Decorative Products Div.
 - h. Samsung; Cheil Industries Inc.
 - i. Swan Corporation (The).
 - j. Transolid, Inc.
 - k. Wilsonart International; Div. of Premark International, Inc.
2. Type: Standard type or Veneer type made from material complying with requirements for Standard type, as indicated, unless Special Purpose type is indicated.
3. Colors and Patterns: Refer to Section 09 06 00, SCHEDULE OF FINISHES.

2.2 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this Article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified.
- 1. Do not use treated materials that do not comply with requirements of referenced woodworking standard or that are warped, discolored, or otherwise defective.
 - 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
 - 3. Identify fire-retardant-treated materials with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Comply with performance requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Use the following treatment type:
- 1. Exterior Type: Organic-resin-based formulation thermally set in wood by kiln drying.
 - 2. Interior Type A: Low-hygroscopic formulation.

3. Mill lumber after treatment within limits set for wood removal that do not affect listed fire-test-response characteristics, using a woodworking plant certified by testing and inspecting agency.
4. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
5. Kiln-dry materials before and after treatment to levels required for untreated materials.

C. Fire-Retardant Particleboard: Panels complying with the following requirements, made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.

1. For panels 3/4 inch (19 mm) thick and less, comply with ANSI A208.1 for Grade M-2 except for the following minimum properties: modulus of rupture, 1600 psi (11 MPa); modulus of elasticity, 300,000 psi (2070 MPa); internal bond, 80 psi (550 kPa); and screw-holding capacity on face and edge, 250 and 225 lbf (1100 and 1000 N), respectively.
2. For panels 13/16 to 1-1/4 inches (20 to 32 mm) thick, comply with ANSI A208.1 for Grade M-1 except for the following minimum properties: modulus of rupture, 1300 psi (9 MPa); modulus of elasticity, 250,000 psi (1720 MPa); linear expansion, 0.50 percent; and screw-holding capacity on face and edge, 250 and 175 lbf (1100 and 780 N), respectively.

D. Fire-Retardant Fiberboard: Medium-density fiberboard panels complying with ANSI A208.2, made from softwood fibers, synthetic resins, and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 200 or less per ASTM E 84.

2.3 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets, except for items specified in Section 08 71 00, DOOR HARDWARE.
- B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 170 degrees of opening, self-closing.

- C. Wire Pulls: Back mounted, solid metal, 4 inches (100 mm) long, 5/16 inch (8 mm) in diameter.
- D. Catches: Roller catches, BHMA A156.9, B03071.
- E. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081 OR BHMA A156.9, B04102; with shelf brackets, B04112.
- F. Shelf Rests: BHMA A156.9, B04013; metal, two-pin type with shelf hold-down clip.
- G. Drawer Slides: BHMA A156.9, B05091.
 - 1. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; full-extension type; zinc-plated steel ball-bearing slides.
- H. Door Locks: BHMA A156.11, E07121.
- I. Drawer Locks: BHMA A156.11, E07041.
- J. Grommets for Cable Passage through Countertops: 2-inch (51-mm) OD, molded-plastic grommets and matching plastic caps with slot for wire passage.
- K. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated, refer to Section 09 06 00, SCHEDULE OF FINISHES.
- L. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.4 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Furring, Blocking, Shims, and Hanging Strips: Fire-retardant-treated softwood lumber, kiln dried to less than 15 percent moisture content.
- C. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- D. Adhesives, General: Do not use adhesives that contain urea formaldehyde.
- E. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
 - 1. Wood Glues: 30 g/L.
 - 2. Contact Adhesive: 250 g/L.

F. Adhesive for Bonding Plastic Laminate: Manufacturer's standard.

1. Adhesive for Bonding Edges: Manufacturer's standard hot-melt adhesive.

2.5 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Unless otherwise indicated, provide premium-grade interior woodwork complying with referenced quality standard.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- D. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 Inch (19 mm) Thick or Less: 1/16 inch (1.5 mm).
 2. Edges of Rails and Similar Members More Than 3/4 Inch (19 mm) Thick: 1/8 inch (3 mm).
 3. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members and Rails: 1/16 inch (1.5 mm).
- E. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
 2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.
- F. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
 1. Seal edges of openings in countertops with a coat of varnish.

2.6 PLASTIC-LAMINATE CABINETS

- A. Grade: Premium.
- B. AWI Type of Cabinet Construction: As indicated.
- C. Reveal Dimension: As indicated.
- D. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
 - 1. Horizontal Surfaces Other Than Tops: Grade HGS or HGL.
 - 2. Postformed Surfaces: Grade HGP.
 - 3. Vertical Surfaces: Grade HGS or VGS.
 - 4. Edges: Grade HGS or Grade VGS.
- E. Materials for Semiexposed Surfaces:
 - 1. Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, Grade VGS, High-pressure decorative laminate, Grade CLS, or Thermoset decorative panels.
 - a. Edges of Plastic-Laminate Shelves: High-pressure decorative laminate.
 - b. For semiexposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, Grade VGS or CLS.
 - 2. Drawer Sides and Backs: Solid-hardwood lumber.
 - 3. Drawer Bottoms: Hardwood plywood.
- F. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL.
- G. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with Section 09 06 00, SCHEDULE OF FINISHES.
- H. Provide dust panels of 1/4-inch (6.4-mm) plywood or tempered hardboard above compartments and drawers, unless located directly under tops.

2.7 SOLID-SURFACING-MATERIAL COUNTERTOPS

- A. Grade: Premium.
- B. Solid-Surfacing-Material Thickness: 3/4 inch (19 mm).
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors of solid-surfacing material complying with Section 09 06 00, SCHEDULE OF FINISHES.
- D. Fabricate tops in one piece, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.

1. Fabricate tops with shop-applied edges of materials and configuration indicated.
 2. Fabricate tops with shop-applied backsplashes.
- E. Install integral sink bowls in countertops in shop.
- F. Drill holes in countertops for plumbing fittings and soap dispensers in shop.

2.8 CLOSET AND UTILITY SHELVING

- A. Grade: Premium.
- B. Shelf Material: Same construction as plastic laminate countertops.
- C. Cleats: Same construction as plastic laminate countertops.

2.9 WOOD VENEER PANELS FOR COLUMN ENCLOSURES

- A. Refer to Drawings for materials and details.

2.10 PLASTIC LAMINATE FOR COLUMN ENCLOSURES

- A. Refer to Drawings for materials and details.

2.11 SHOP FINISHING

- A. Grade: Provide finishes of same grades as items to be finished.
- B. General: Finish architectural woodwork at fabrication shop as specified in this Section. Defer only final touchup, cleaning, and polishing until after installation.
- C. General: Shop finish transparent-finished interior architectural woodwork at fabrication shop as specified in this Section. Refer to Section 09 91 00, PAINTING for finishing opaque-finished architectural woodwork.
- D. General: Drawings indicate items that are required to be shop finished. Finish such items at fabrication shop as specified in this Section. Refer to Division 09 painting Sections for finishing architectural woodwork not indicated to be shop finished.
- E. Shop Priming: Shop apply the prime coat including backpriming, if any, for transparent-finished items specified to be field finished. Refer to Section 09 91 00, PAINTING for material and application requirements.
- F. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling and to end-grain surfaces. Concealed surfaces of

plastic-laminate-clad woodwork do not require backpriming when surfaced with plastic laminate, backing paper, or thermoset decorative panels.

G. Transparent Finish:

1. Grade: Premium.
2. AWI Finish System: Catalyzed polyurethane.

H. Opaque Finish:

1. Grade: Premium.
2. AWI Finish System: Catalyzed polyurethane.
3. Color: Refer to Section 09 06 00, SCHEDULE OF FINISHES.
4. Sheen: Refer to Section 09 06 00, SCHEDULE OF FINISHES for gloss units measured on 60-degree gloss meter per ASTM D 523.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.
- F. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled

flush with woodwork and matching final finish if transparent finish is indicated.

G. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.

1. Install cabinets with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.

2. Maintain veneer sequence matching of cabinets with transparent finish.

3. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches (400 mm) o.c. with No. 10 wafer-head screws sized for 1-inch (25-mm) penetration into wood framing, blocking, or hanging strips.

H. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.

1. Align adjacent solid-surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

2. Install countertops with no more than 1/8 inch in 96-inch (3 mm in 2400-mm) sag, bow, or other variation from a straight line.

3. Secure backsplashes to walls with adhesive.

4. Calk space between backsplash and wall with sealant specified in Section 07 92 00 JOINT SEALANTS.

I. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.

J. Refer to Section 09 91 00, PAINTING for final finishing of installed architectural woodwork.

K. Wood Veneer Panels for Column Enclosures: Install in strict accordance with manufacturer's printed instructions.

L. Plastic Laminate for Column Enclosures: Install in strict accordance with manufacturer's printed instructions.

3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

B. Clean, lubricate, and adjust hardware.

C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

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